

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-12. (Cancelled)

13. (Currently Amended) A method for identifying a compound that modulates a tissue protective activity, comprising:

- (a) contacting a test compound with a tissue protective cytokine receptor complex-expressing cell, wherein said tissue protective cytokine receptor complex comprises an erythropoietin (EPO) receptor and a βc receptor and wherein said cell is transformed with a nucleic acid comprising a nucleotide sequence that encodes a reporter gene operably linked to a regulatory element associated with a tissue protective cytokine receptor complex activity;
- (b) identifying a test compound that increases ~~or decreases~~ the level of reporter gene expression relative to the level of reporter gene expression measured in the absence of the test compound, and
- (c) assaying the identified test compound for ~~a tissue protective activity~~ the ability to inhibit apoptosis,

wherein a test compound that increases the level of reporter gene expression relative to the level of reporter gene expression in the absence of the test compound and inhibits apoptosis is identified as a compound that modulates a tissue protective activity.

14. (Previously Presented) The method of Claim 13, wherein the regulatory element is a serum response element.

15. (Cancelled)

16. (Previously Presented) The method of Claim 13, wherein the cell is a prokaryotic cell.

17. (Previously Presented) The method of Claim 13, wherein the cell is a eukaryotic cell.

18. (Previously Presented) The method of Claim 17, wherein the eukaryotic cell is a human cell.

19. (Previously Presented) The method of Claim 13, wherein the cell endogenously expresses at least one subunit of the tissue protective cytokine receptor complex.

20. (Previously Presented) The method of Claim 13, wherein the cell is a BaF3 cell.

21. (Currently Amended) A method of identifying a compound that modulates the activity of a tissue protective cytokine receptor complex comprising an erythropoietin receptor and a βc receptor, said method comprising:

- (a) contacting a test compound with a cell of a modified yeast strain (i) containing ~~(i)~~ a nucleotide sequence encoding a reporter gene that is operably linked to a tissue protective cytokine receptor complex-responsive promoter and (ii) ~~expresses~~ expressing a tissue protective cytokine receptor complex comprising an erythropoietin receptor and a βc receptor; ~~and~~
- (b) determining the level of activity of said tissue protective cytokine receptor complex by measuring the level of reporter gene expression; and
- (c) assaying the test compound for the ability to inhibit apoptosis,

such that if the level of reporter gene activity in the presence of the compound increases or decreases relative to the level of reporter gene activity in the absence of the compound and if the test compound inhibits apoptosis, then a compound that modulates the activity of said tissue protective cytokine receptor complex is identified.

22-30. (Cancelled)

31. (Previously Presented) The method of Claim 13, wherein the step of assaying the identified compound for tissue protective activity further comprises detecting the presence of nucleolin in the cell and wherein an upregulation of nucleolin in the cell indicates a tissue protective activity.

32. (Previously Presented) The method of Claim 13, wherein the step of assaying the identified compound for tissue protective activity further comprises detecting or measuring an increased level of activity of neuroglobin or cytoglobin in a cell and wherein an upregulation of neuroglobin or cytoglobin in the cell indicates a tissue protective activity.

33-42. (Cancelled)

43. (Previously Presented) The method of Claim 13 or 21, wherein the test compound is an antibody specific for the tissue protective cytokine receptor complex.

44. (Previously Presented) The method of Claim 13 or 21, wherein the test compound is an antibody specific for a tissue protective cytokine receptor complex ligand.

45. (Previously Presented) The method of Claim 13 or 21, wherein the test compound is a small molecule.

46. (Previously Presented) The method of Claim 13 or 21, wherein the test compound is a peptide.

47. (Previously Presented) The method of Claim 13 or 21, wherein the test compound is a member of a library.

48. (Previously Presented) The method of Claim 44, wherein the tissue protective cytokine receptor complex ligand is an EPO.

49. (Previously Presented) The method of Claim 13 or 21, wherein the compound binds the tissue protective cytokine receptor complex.

50. (Cancelled)

51. (Previously Presented) The method of Claim 13 or 21, wherein the tissue protective activity inhibits damage of a cell, tissue, or organ.

52. (Previously Presented) The method of Claim 13 or 21, wherein the tissue protective activity inhibits death of a cell, tissue, or organ.
53. (Previously Presented) The method of Claim 13 or 21, wherein the tissue protective activity is specific to excitable cells, tissues, or organs.
54. (Previously Presented) The method of Claim 13 or 21, wherein the tissue protective activity is specific to excitable cells, tissues, or organs of the central nervous system.
55. (New) The method of Claim 13 or 21, wherein the ability to inhibit apoptosis is assayed in a cell-based assay.
56. (New) The method of Claim 55, wherein the ability of the test compound to modulate tissue protective activity is assayed in a cell isolated from an animal's tissues or organs.
57. (New) The method of Claim 56, wherein the cell is a cardiomyocyte cell.
58. (New) The method of Claim 56, wherein the cell is a neuronal, retinal, muscle, heart, lung, liver, kidney, small intestine, adrenal cortex, adrenal medulla, capillary endothelial, testes, ovary, pancreas, bone, skin, or endometrial cell.
59. (New) The method of Claim 55, wherein the cell is a neuronal, retinal, muscle, heart, lung, liver, kidney, small intestine, adrenal cortex, adrenal medulla, capillary endothelial, testes, ovary, pancreas, bone, skin, or endometrial cell.
60. (New) The method of Claim 55, wherein the cell is a cardiomyocyte cell.
61. (New) The method of Claim 13 or 21, wherein the ability to inhibit apoptosis is assayed in an animal.